

A numerical study using (FEM) has been carried out to investigate the effect of some parameters on the stress concentration factor in a plate, having different types of cutout and subjected to uniaxial tension. These parameters include the location of cutout, orientation of cutout with respect to the axis of loading, radius of bluntness of cutout and the thickness of the plate. Maximum values of stress concentration factor (SCF) were found in cases of: 1. the cutout is in the center of the plate, 2. the angle of a corner of cutout is bisected by an axis perpendicular to the loading axis, 3. the corners of cutout are sharp (zero radius), and 4. the plate is very thin.